

REMARKS

Overview of the Office Action

Claims 1, 2, 8-10, and 12 have been rejected under 35 U.S.C. 112, second paragraph, as indefinite.

Claims 1, 8, 10, 12, and 18 have been rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent Appl. Pub. No.: 2004/0169462 (“Sasaki”) in view of U.S. Patent Appl. Pub. No.: 2002/0045030 (“Ozin”).

Claims 2 and 9 have been rejected under 35 USC 103(a) as unpatentable over Ozin in view of U.S. Patent Appl. Pub. No.: 2002/0137248 (“Ogawa”).

Status of the claims

Claims 1, 10, and 11 have been amended.

Claims 3, 5, 7, 11, 13, 14, 16, and 17 have been previously withdrawn.

Claims 4, 6, 15, and 19-21 have been previously canceled.

Claims 1, 2, 8-10, 12, 18, remain pending.

Rejection of claims 1, 2, 8-10, and 12 under 35 U.S.C. 112, second paragraph

The Office Action states that the recitation of “a different solution containing a different material” in claim 1 renders the claim indefinite because it is unclear what the solution and material are different from. Claim 1 has been amended to clarify that the material in the second step (b) is different from the material in the first step (b).

The Office Action also states that the recitation of “said cover layer” in claim 8 renders the claim indefinite because the claim refers to “a first cover layer” and “a second cover layer”. Claim 8 has been amended to clarify that “said cover layer” refers to “said second cover layer”.

Applicants submit that these rejections have been overcome.

Rejection of claims 1, 8, 10, 12, and 18 under 35 U.S.C. 103(a)

The Office Action indicates that the combination of Sasaki and Ozin teaches all of Applicants’ recited elements.

Independent claim 1 has been amended to recite, inter alia, a method of depositing material on a substrate layer, wherein said material comprises light emitting polymers or conducting polymers, where the method includes “(a) forming a multilayered structure, said forming comprising: (i) coating said substrate layer with a spacer/pattern layer comprising a photoresist”. Support for the claim amendment can be found in paragraph [0032] of Applicants’ specification.

Sasaki discloses a method for manufacturing an organic electroluminescent device, wherein a substrate with grooves is immersed in a solution and the grooves on the substrate are filled with the solution by a capillary phenomenon (see paragraph [0071], and Figs 6 and 7 of Sasaki). The substrate of Sasaki consists of insulating material like SiO₂ (see paragraph [0066] of Sasaki). If the grooves of Sasaki are to be filled with different kinds of solutions, stoppers made of photoresist are formed in the middle of the groove (see paragraph [0085] of Sasaki). The stoppers of Sasaki are removed after filling the grooves with the solution (see paragraphs [0089] and [0090] of Sasaki).

The Examiner cites fig. 2 and paragraph [0083] of Sasaki as teaching that a spacer 60 can be formed on the substrate. The cited passages of Sasaki read, “After the anode 58 is formed on the interlayer insulating film 57 by ITO, SiO₂ is deposited on the entire upper surface of the substrate 40 to form the insulating film 60, and the insulating film 60 covers the anode 58. Subsequently, a groove for red sub-pixel 3R, a groove for green sub-pixel 3G and a groove for blue sub-pixel 3B are formed on the insulating film 60 as shown in FIG. 4.”

However, The insulating film 60 of Sasaki is made of SiO₂ or another insulating material (see paragraph [0066] of Sasaki). Thus, the insulating film 60 (or spacer) of Sasaki is not a photoresist, as recited in Applicants’ amended claim 1.

Ozin discloses several methods for producing patterned crystalline colloidal crystals on a surface or within a substrate (see paragraph [0119] of Ozin). None of the methods disclosed by Ozin uses a multilayer structure comprising a substrate, a spacer /pattern layer and a cover layer. Rather, Ozin teaches patterned substrates made of Si (see paragraphs of [0134], [0135] of Ozin). The patterned substrates of Ozin include grooves etched therein, which are to be filled (paragraphs [0125], [0126]).

Thus, Ozin also clearly does not teach or suggest, “a spacer/pattern layer comprising a photoresist”, as recited in Applicants’ amended claim 1.

In contrast to both Sasaki and Ozin, the substrate recited in Applicants’ amended claim 1 is coated with additional spacer/pattern layers comprising photoresist materials to create together with the substrate predetermined regions on the substrate into which solutions can spread.

Further, using photoresist material for the spacer/pattern has the advantageous technical effect of being easily coated and structured onto the substrate to produce the spacer/pattern layer.

Independent claims 8 and 18 have been amended to recite limitations similar to independent claim 1 and are, therefore, deemed to be patentably distinct over Sasaki and Ozin for at least those reasons discussed above with respect to independent claim 1.

In view of the foregoing, Applicants submit that the combination of Sasaki and Ozin fails to teach or suggest the subject matter recited in independent claims 1, 8, and 18. Accordingly, claims 1, 8, and 18 are patentable over Sasaki and Ozin under 35 U.S.C. §103(a).

Dependent claims

Claims 10-12, which depend from independent claim 8, incorporate all of the limitations of independent claim 8 and are, therefore, deemed to be patentably distinct over Sasaki and Ozin for at least those reasons discussed above with respect to independent claim 8.

Rejection of claims 2 and 9 under 35 U.S.C. §103(a)

The Office Action states that the combination of Ozin and Ogawa teaches all of Applicants' recited elements.

As previously discussed, Ozin does not teach or suggest the invention recited in Applicants' independent claims 1 and 8. Claims 2 and 9, which depend from independent claims 1 and 8, respectively.

Because Ozin fails to teach or suggest the subject matter recited in independent claims 1 and 8 and because Ogawa fails to teach or suggest any elements of independent claims 1 and 8 that Ozin is missing, the addition of Ogawa to the reference combination fails to remedy the above-described deficiencies of Ozin. Thus, dependent claims 2 and 9 are patentable for at least the same reasons as claims 1 and 8.

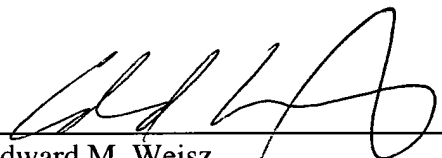
Conclusion

In view of the foregoing, reconsideration and withdrawal of all rejections, and allowance of all pending claims is respectfully solicited.

Should the Examiner have any comments, questions, suggestions, or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate reaching a resolution of any outstanding issues.

Respectfully submitted,
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